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(71) Applicants *(for all designated States except US)*:
GENOMINE INC. [KR/KR]; Venture Bldg 306, Pohang Technopark, Pohang, Kyungsangbuk-do 790-834 (KR).
POSTECH FOUNDATION [KR/KR]; #San 31, Hyoja-dong, Nam-ku, Pohang, Kyungsangbuk-do 794-784 (KR).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **NAM, Hong-Gil** [KR/KR]; Gyosu Apt. #A-702, Jigok-dong, Nam-gu, Pohang, Kyungsangbuk-do 790-390 (KR). **RYU, Jong-Sang** [KR/KR]; 5345 Taepyeong 1-dong, Sujeong-gu, Seongnam, Gyeonggi-do 461-191 (KR). **LIM, Pyung-Ok** [KR/KR]; Gyosu Apt. #4-902, Jigok-dong, Nam-gu, Pohang, Kyungsangbuk-do 790-390 (KR). **KOO, Ja-Choon** [KR/KR]; 468-11 Hwagok 4-dong, Gangseo-gu, Seoul 157-894 (KR).

(74) Agent: **KIM, Seog-Hyun**; 9th Floor, Daekyung Building, 120, 2-ka, Taepyung-ro, Chung-ku, Seoul 100-724 (KR).

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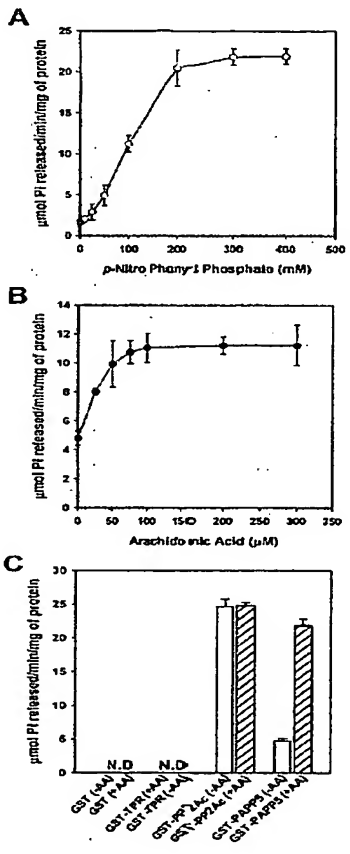
(54) Title: NOVEL PHYTOCHROME-INTERACTING PROTEIN AND A USE THEREOF



(57) Abstract: The present invention relates to a novel protein interacting with phytochromes and use thereof, and more particularly, to a polypeptide having either an amino acid sequence set forth in SEQ ID NO: 4 or an amino acid sequence having at least 70% with said amino acid sequence, and use thereof. The polypeptide interacts with phytochromes A and B, and the TPR domain present at the N-terminal region of the polypeptide is involved in the interaction. Also, a PP2A catalytic domain (PP2Ac) having phosphatase activity is present at the C-terminal region of the polypeptide. The polypeptide can be used as a phosphatase, and is useful in the production of plants sensitive to light signal transduction. Furthermore, the TPR domain present in the polypeptide is useful in the production of dwarf plants.

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